

REMARKS

Reconsideration of the Office action mailed on October 1, 2004 in connection with the above-identified patent application is requested in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 USC §103

Claims 1-5, 13-15 and 30-33 were rejected under 35 USC §103 as obvious over U.S. Patent No. 1,811,066 to Tannewitz in view of U.S. Patent No. 3,785,230 to Lokey. Applicant traverses and intends to appeal that rejection. Prior to filing the appeal, however, applicant requests that this amendment be entered in order to minimize the issues for appeal. Applicant has also included certain arguments in this amendment in an attempt to further minimize the issues for appeal or to prevent the need for an appeal.

Concerning the amendment, applicant has amended claim 5 to make it an independent claim. Amended claim 5 is not obvious in light of the cited references because the cited references fail to disclose all the limitations set forth in the claim. Specifically, claim 5 requires an arbor block and a brake mechanism mounted to the arbor block. Neither Tannewitz nor Lokey discloses a brake mechanism mounted to an arbor block. In Tannewitz, the brake is mounted on shaft 3, as shown in Fig. 1. In Lokey, the brake is mounted on frame 112, as shown in Fig. 7. Claim 5 should be allowable over the cited references because neither reference discloses a brake mechanism mounted to an arbor block. Applicant has amended claim 5 to make it an independent claim so that it can be allowed and thereby minimize the issues for appeal.

The remaining claims should also be allowed over the cited references for the reasons given in the prior amendment. One of those reasons is that the brake system of Lokey cannot stop the blade fast enough to avoid a serious injury if the brake were triggered by a person contacting the blade, and therefore it would not have been obvious to trigger Lokey's brake system upon such contact. The Examiner, however, says that the brake system of Lokey could be modified to work with a contact detection system by simply using a faster solenoid. (Office Action, page 6.) But applicant has looked for such a solenoid and, as far as applicant is aware, it does not exist; it certainly does not exist in any form practical for use in Lokey's brake system.

A solenoid must energize a coil in order to work and the inductance of the coil limits the time within which the coil can be energized. The bigger the coil, the larger the inductance and the more time required to energize the coil. A solenoid with a relatively large coil would be needed to generate enough force to accelerate Lokey's rubber block into the blade after the coil has energized, but a large coil would also have a larger inductance and therefore more time would be required to energize the coil. Also, a stronger solenoid requires a larger core, but a larger core has more inertia and therefore requires more force to accelerate quickly. It is a catch-22; if you want a fast solenoid, the coil must be small so it can energize quickly and the core must be small so it can move quickly, but a small coil and small core would not generate sufficient force to accelerate Lokey's rubber block into the blade fast enough to stop the blade once contact has been detected. If you want a solenoid that generates a sufficient force to accelerate Lokey's rubber block into the blade quickly, then you would need a large coil and large core, but a large coil would take too long to energize and a large core would

require more force to accelerate. Thus, it is not simply a question of replacing the solenoid in Lokey with a faster solenoid. Something more is required, and that something is neither disclosed nor suggested by the cited references. If the Examiner continues to assert that Lokey's brake mechanism can be modified by replacing the existing solenoid with one that is fast and strong enough to work upon detection of contact, then applicant asks the Examiner to identify such a solenoid. There can be no reasonable expectation that Lokey's brake system could be modified in the manner suggested by the Examiner absent a practical solenoid that is fast and strong enough to accelerate Lokey's rubber block into the blade so that a person would not be seriously injured if the solenoid were triggered upon detection of contact.

Additionally, there is no teaching, suggestion or motivation to modify Lokey's brake system so that it works upon detection of contact instead of proximity, as suggested by the Examiner. The Examiner says the motivation to modify Lokey's brake comes from the desire to make Lokey's saw safer. But modifying Lokey's brake to trigger upon contact between a person and the blade would not make the saw safer. In fact, the exact opposite is true. If the braking system of Lokey is not triggered until actual contact is detected, the injury will inevitably be worse than if the brake is triggered upon proximity. Therefore, triggering the brake of Lokey upon detection of contact instead of proximity would make the saw of Lokey more dangerous rather than safer. In other words, detecting proximity is always safer than detecting contact so there is no reason to modify Lokey to detect contact. Thus the Examiner's proposed motivation is directly contrary to the proposed modification and it would therefore not be

obvious to make the claimed combination in view of the teaching of Lokey alone or in combination with any of the cited references.

Finally, the Examiner repeatedly says that Lokey's detection system could be modified to detect contact instead of proximity by simply changing the values of electrical components. (Office Action, page 5.) Where is the support for that assertion? Lokey fails to make any statements supporting that conclusion. To the contrary, Lokey talks exclusively about detecting proximity; he never suggests detecting contact. Moreover, what electrical components would have to be changed to detect contact instead of proximity? Lokey is silent on that question. Given Lokey's disclosure, it is more reasonable to conclude that Lokey's system always detects proximity and Lokey's brake will fire when that proximity is detected.

The arguments set forth herein, and the reasons set forth in prior amendments, show that applicant's claims are not obvious in light of Tannevitz and Lokey and therefore applicant requests that the currently pending claims be allowed. If the Examiner has any questions concerning these points, he is invited to telephone applicant's undersigned attorney at the number listed below.

Respectfully submitted,

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Date: Dec. 1, 2004

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